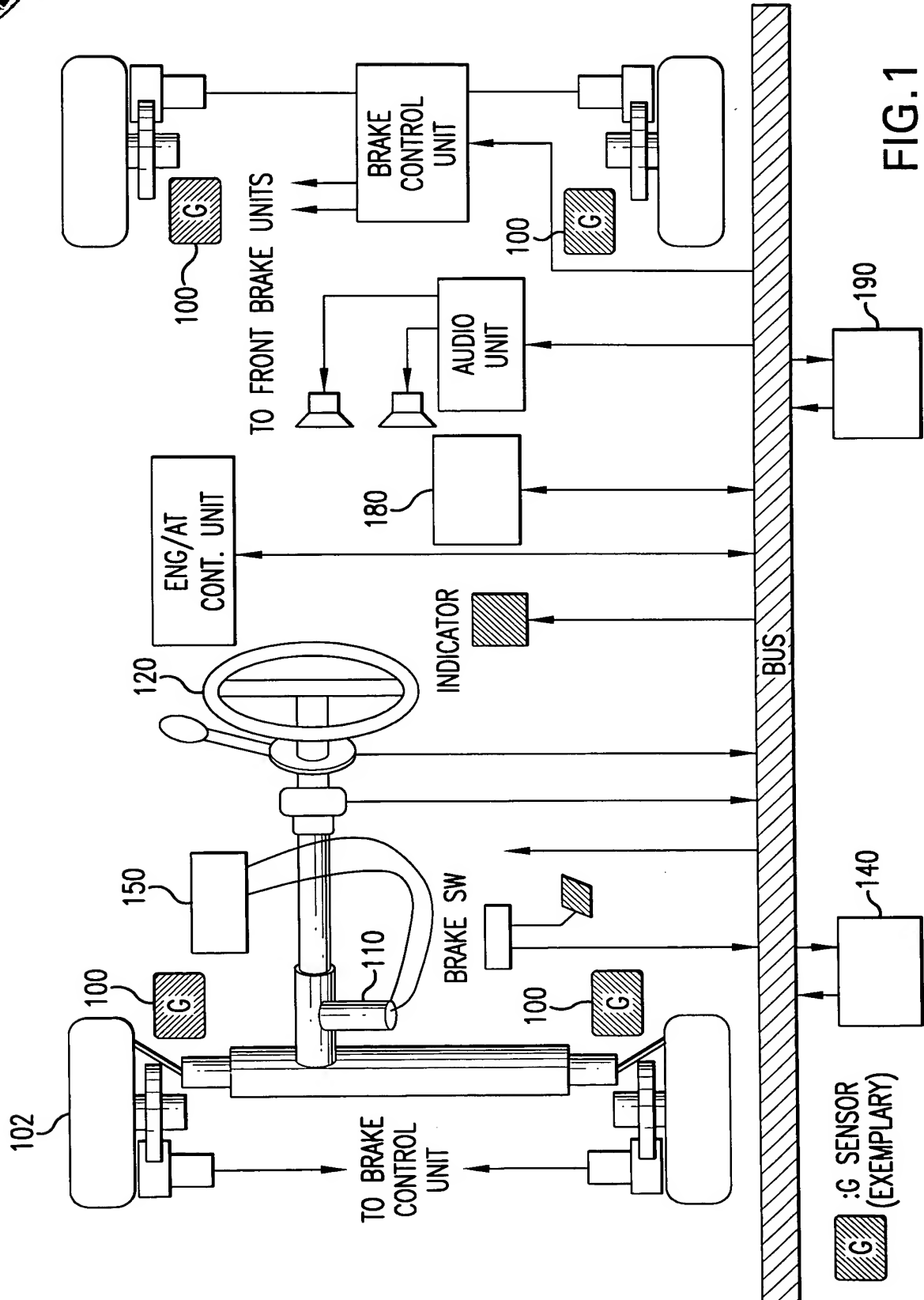


Inventor(s): Hiroshi KAWAZOE et al.  
Appl. No.: 10/811,148



**FIG. 1**

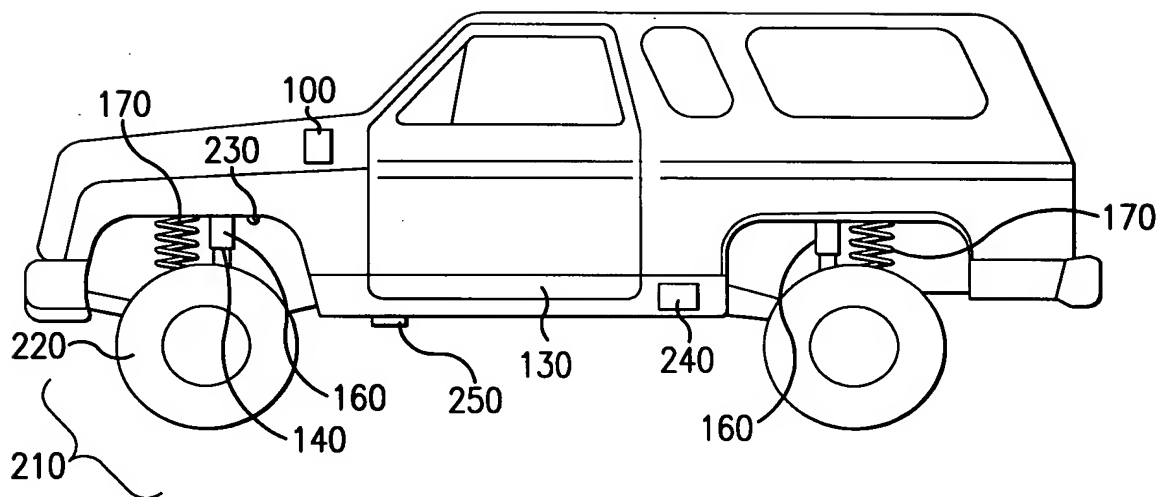


FIG.2

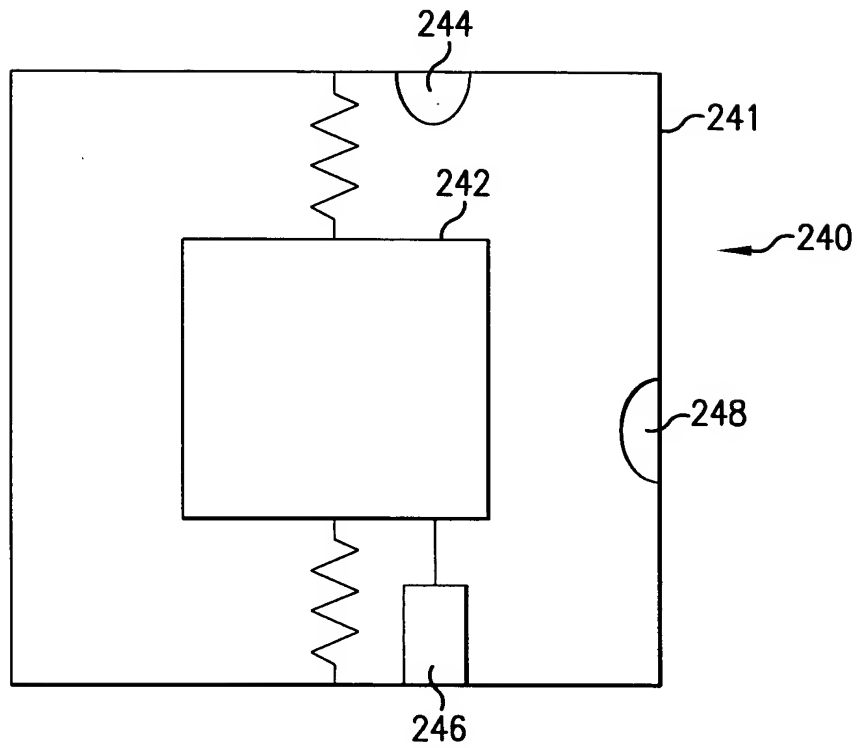


FIG.3

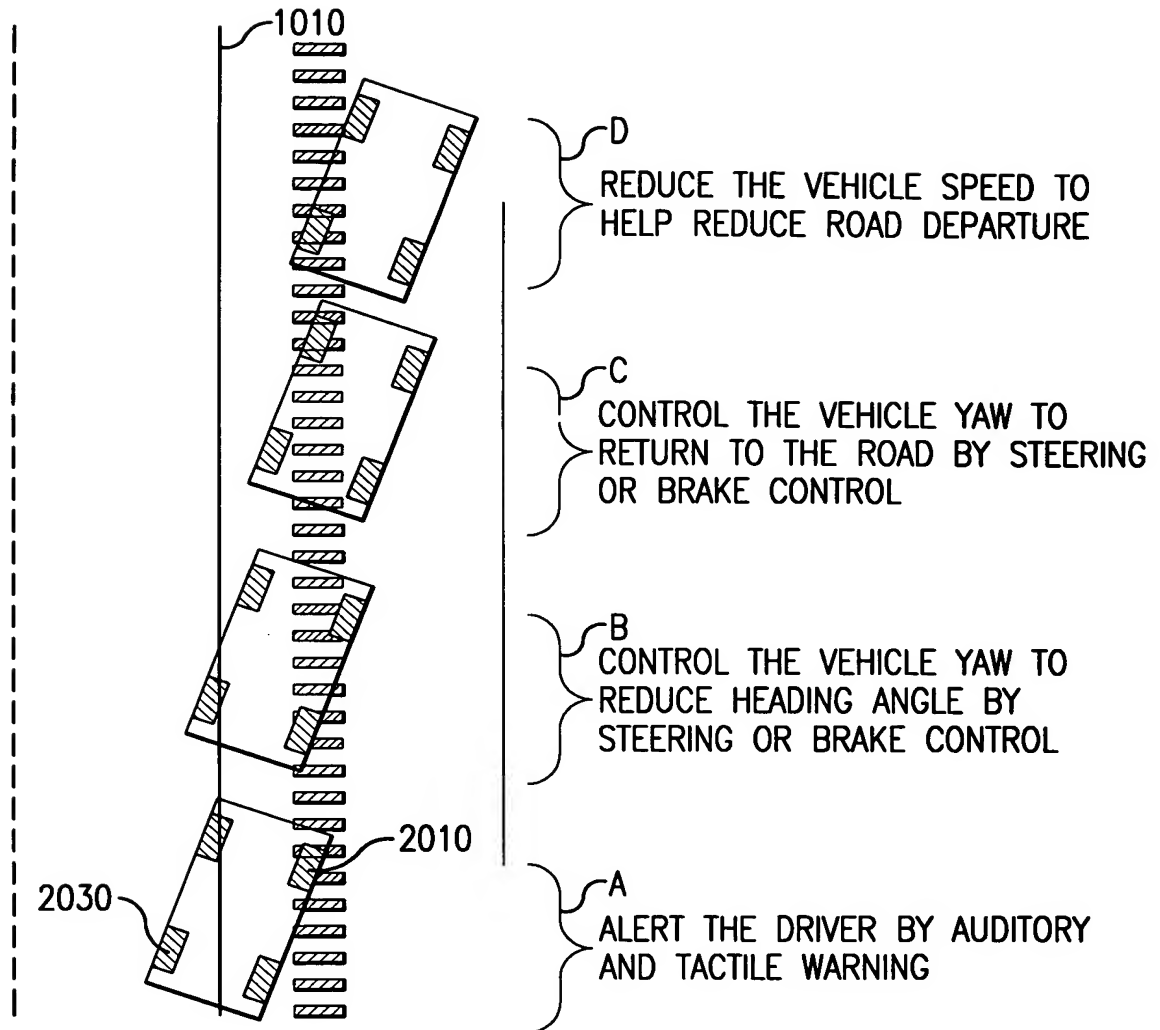


FIG.4

# CALCULATION OF THE LATERAL SPEED AT DEVIATION

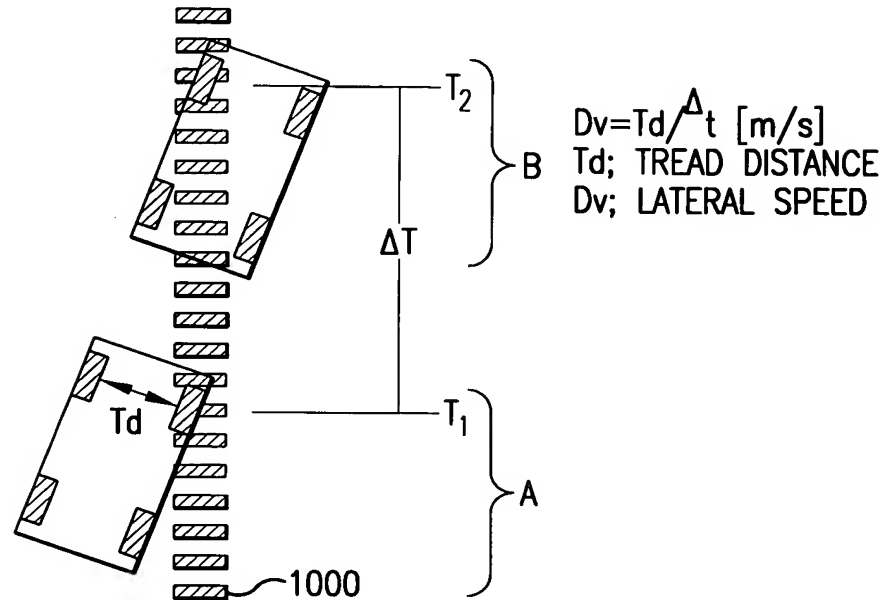


FIG.5a

# CALCULATION OF THE HEADING ANGLE AT DEVIATION

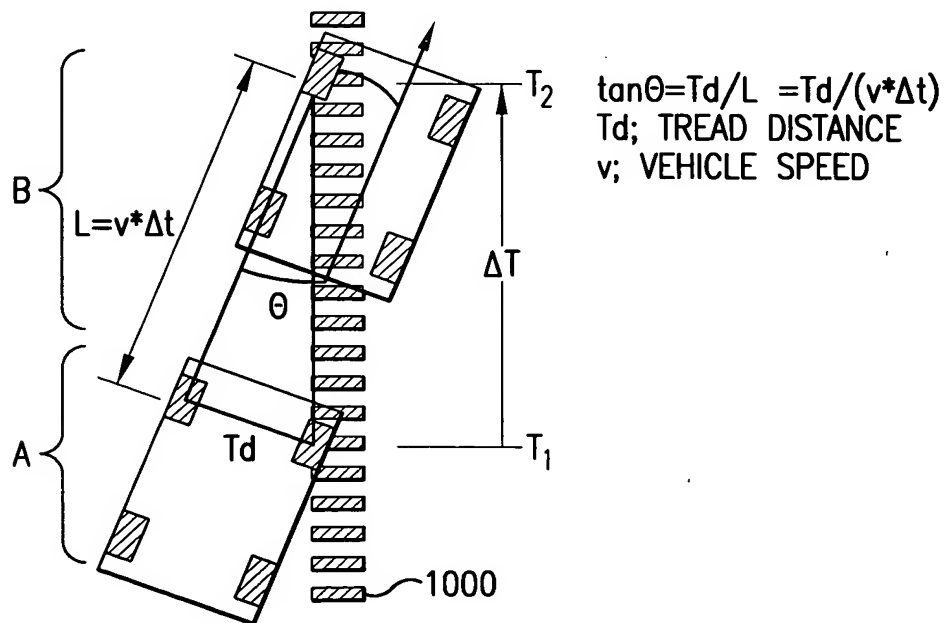


FIG.5b

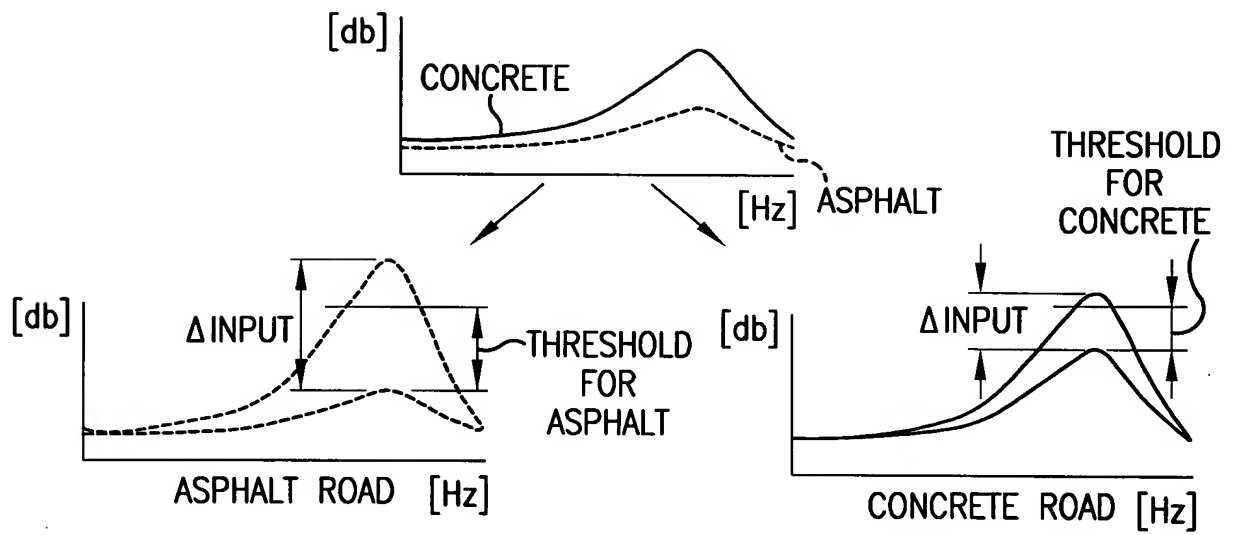


FIG.6

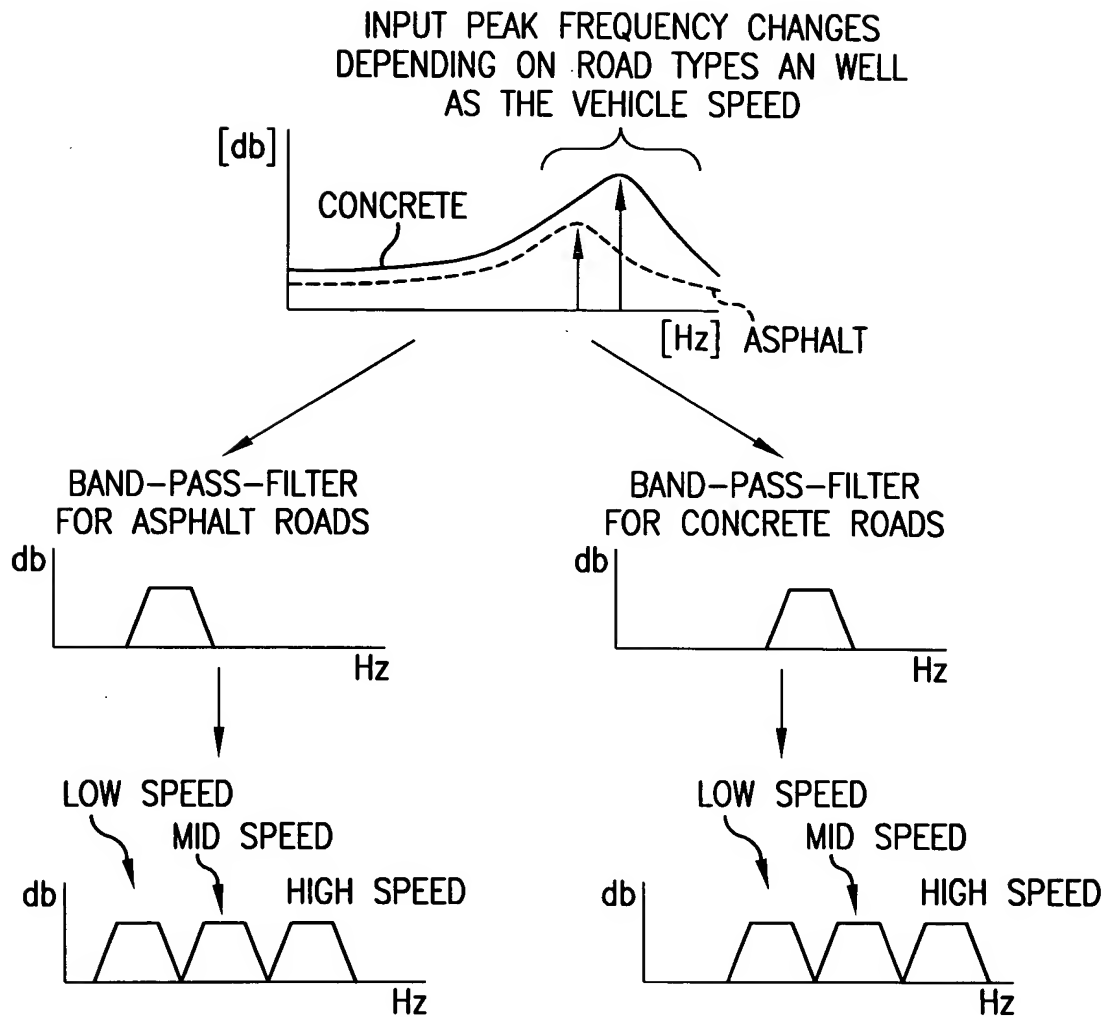


FIG.7

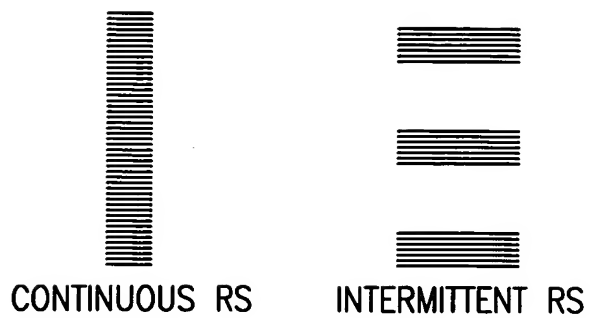


FIG. 8

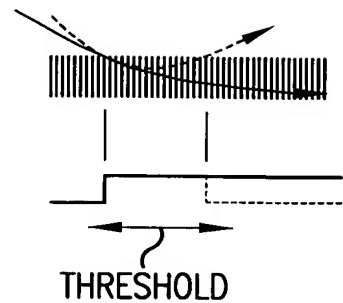


FIG. 9

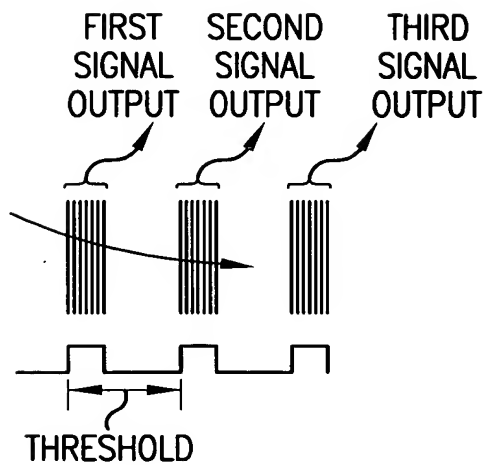


FIG. 10

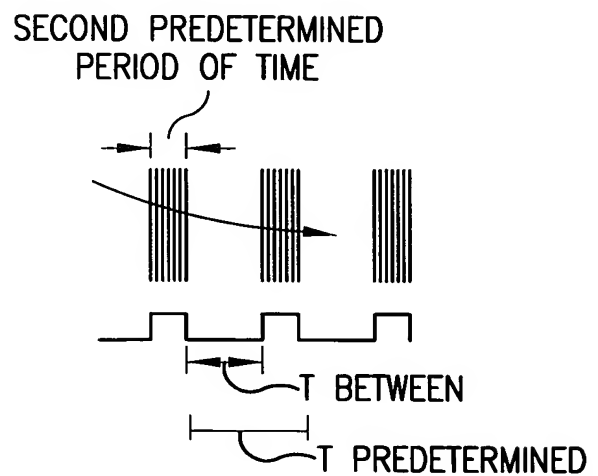


FIG. 11

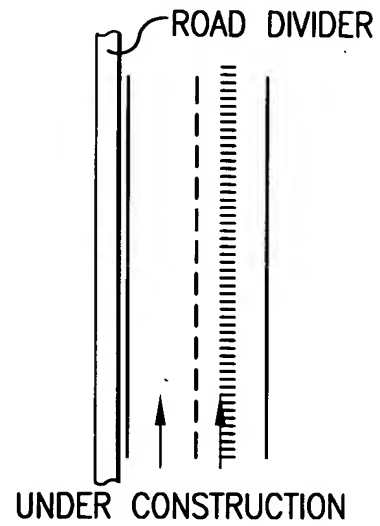


FIG.12

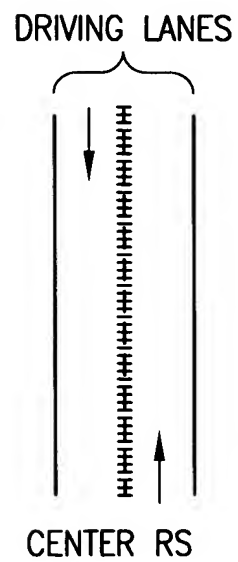


FIG.13

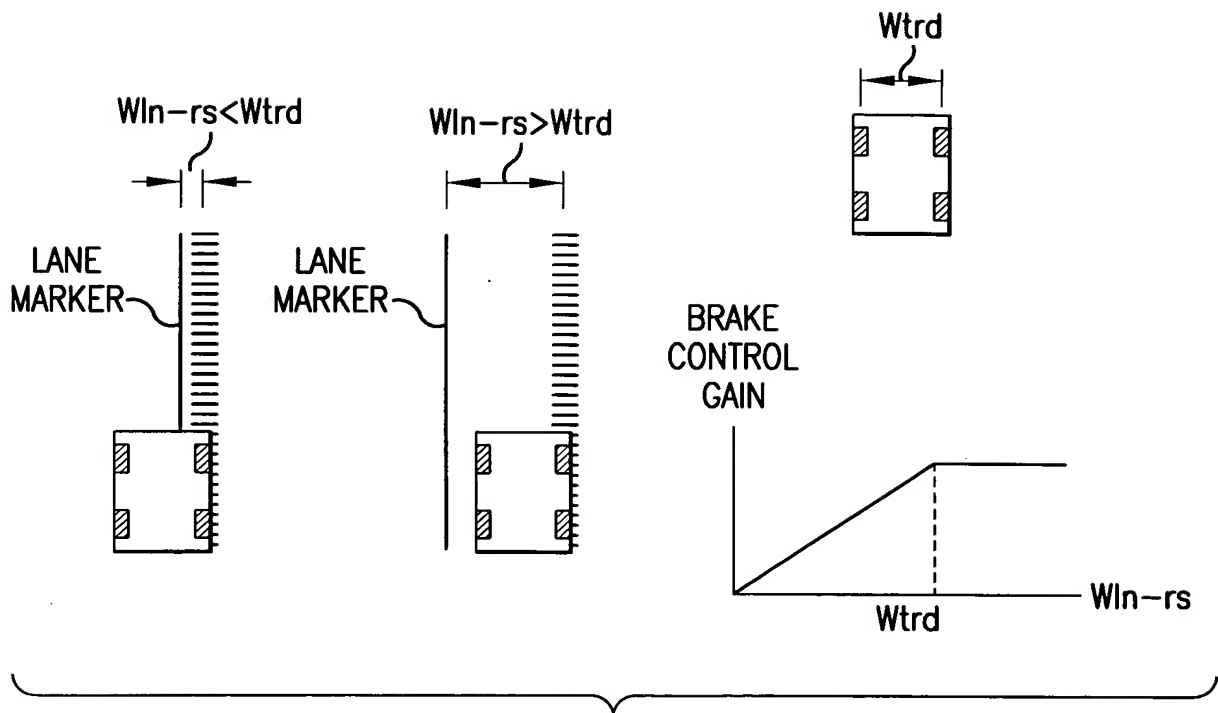


FIG.14

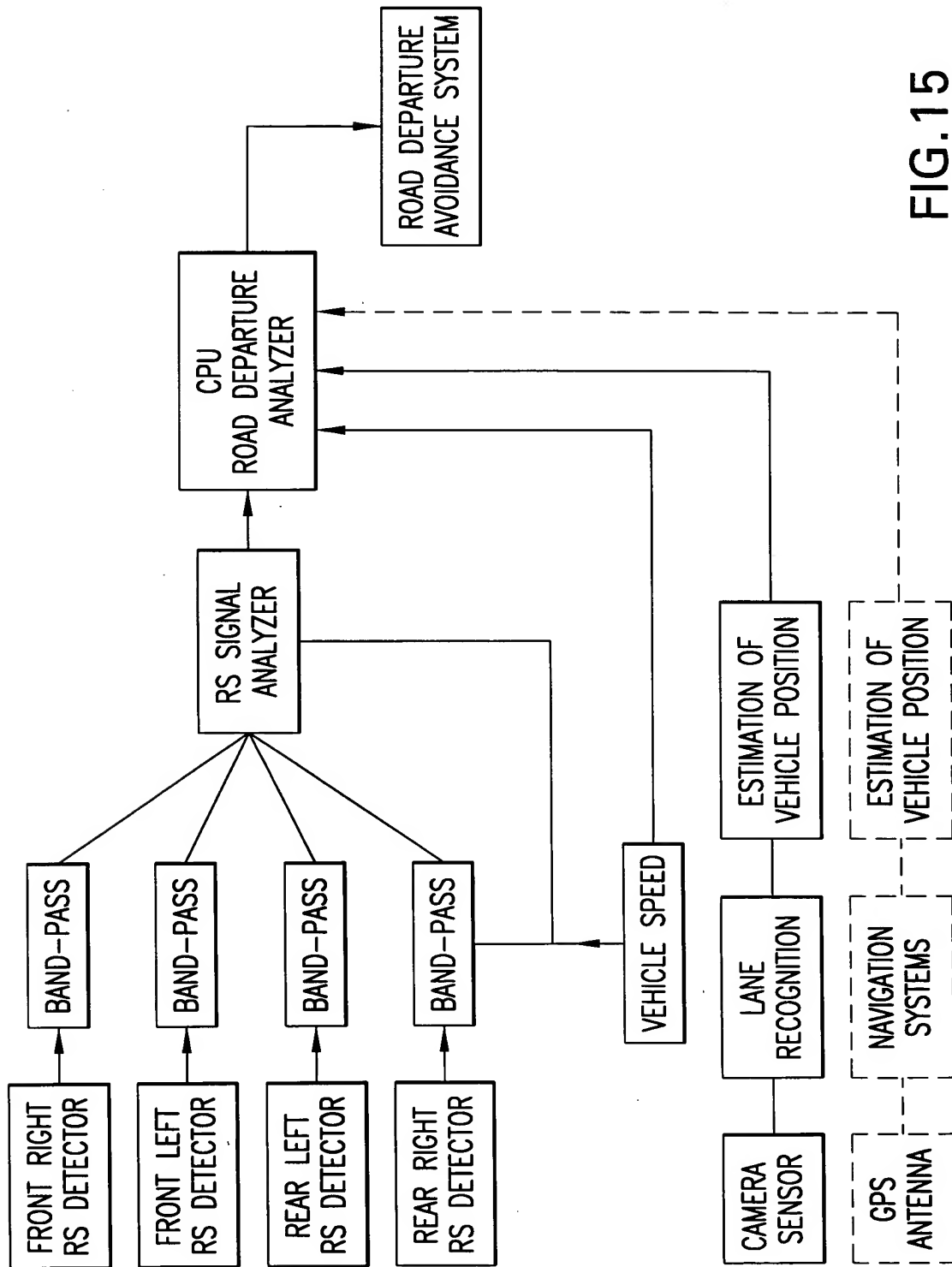


FIG.15

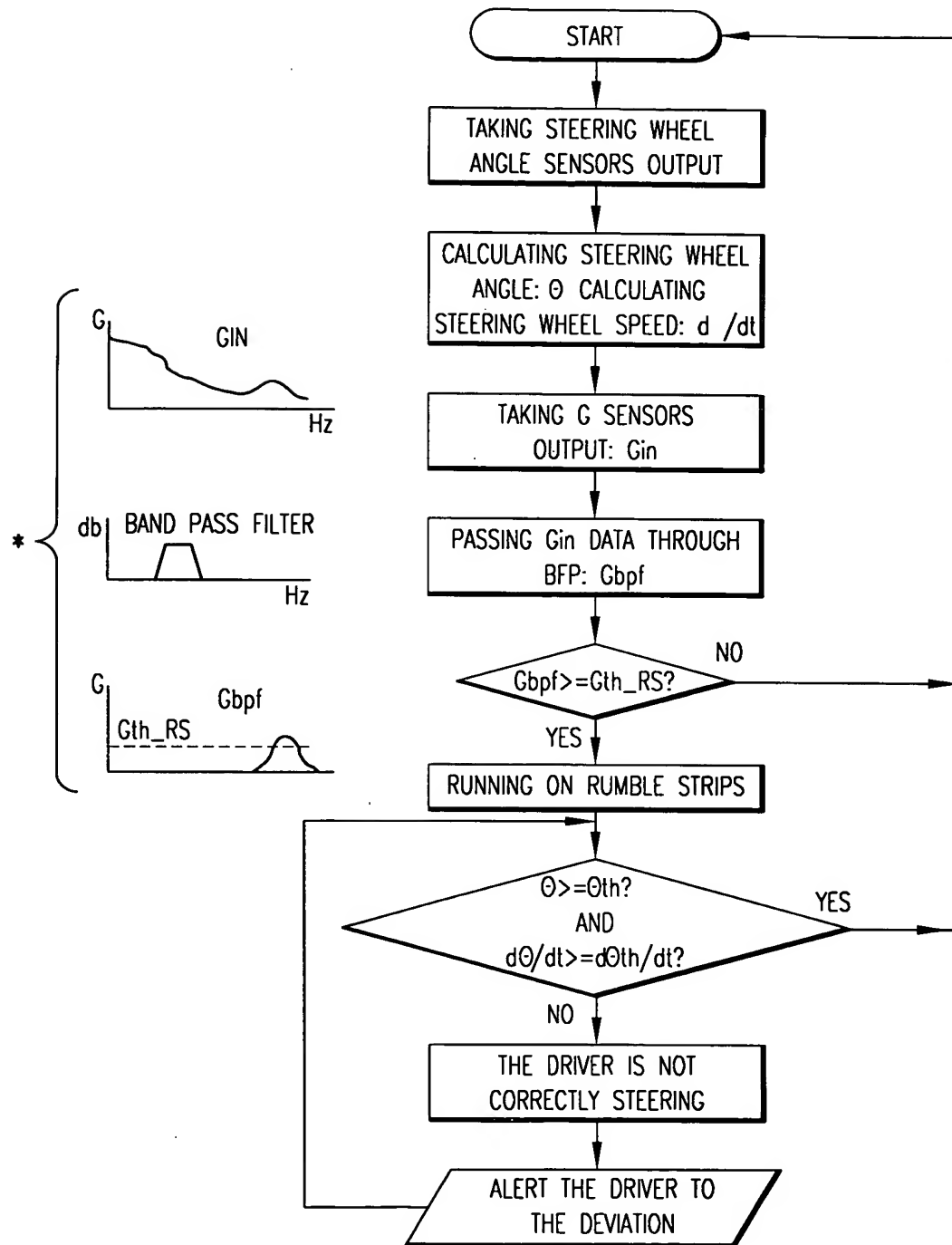


FIG.16

EXEMPLARY CUT-OFF FREQUENCIES OF BAND-PASS FILTER  
IN RESPONSE TO VEHICLE SPEED. THE PATTERN OF RUMBLE  
STRIPS: CYCLE DISTANCE: 30.48cm (1 FOOT)

140+km/h 128Hz BPF#1  
120~140km/h 109 Hz BPF#2  
100~120 km/h 91 Hz BPF#3  
80~100km/h 72 Hz BPF#4  
60~80km/h 55Hz BPF#5

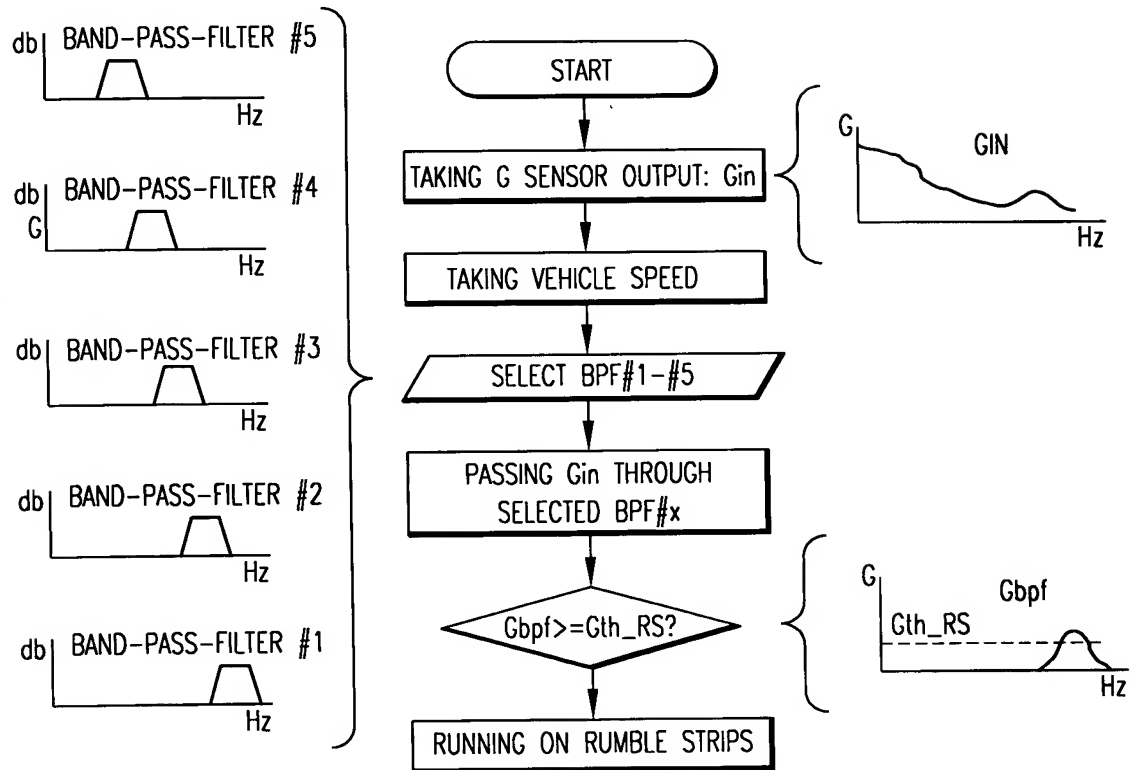


FIG.17

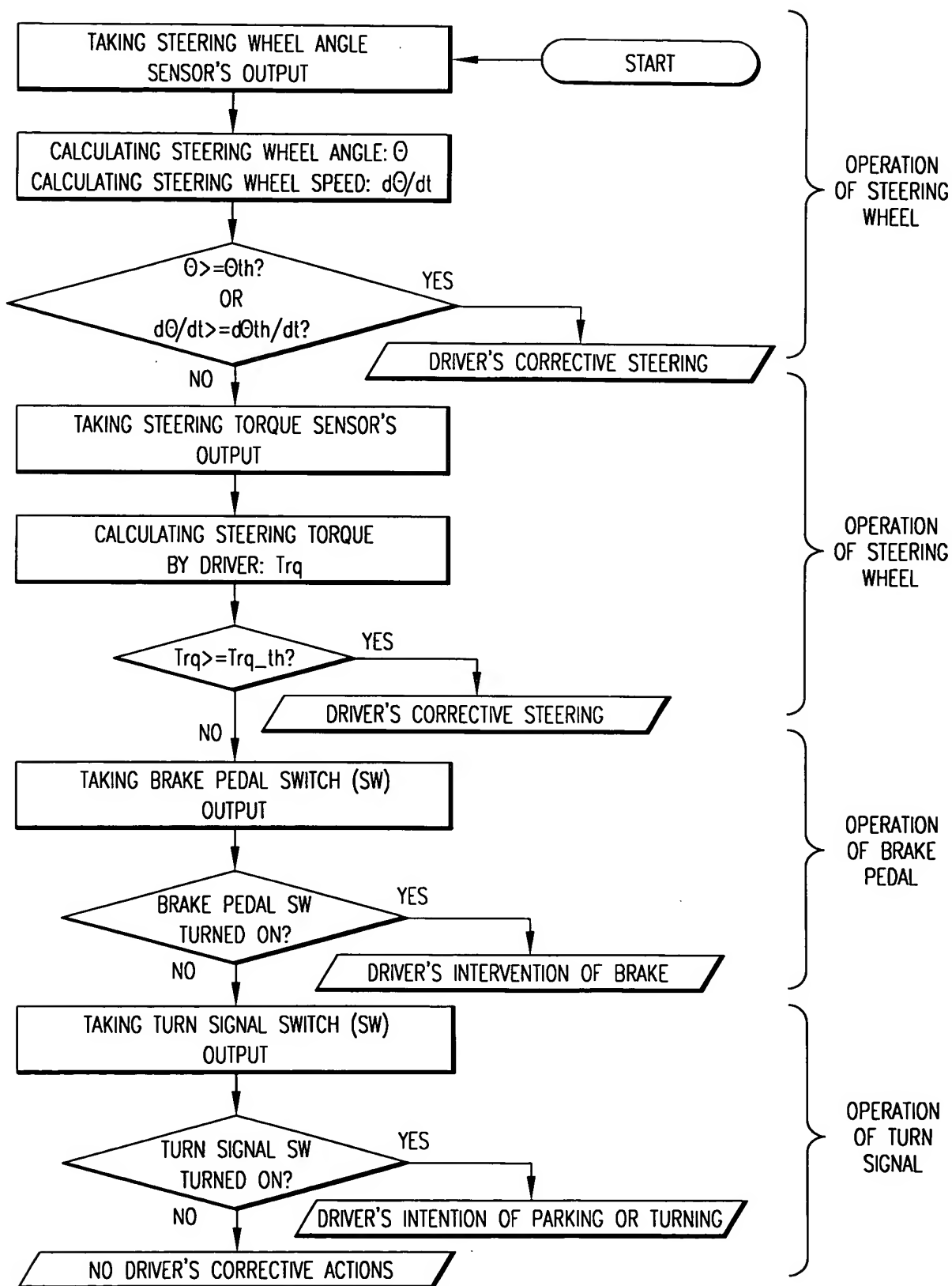


FIG.18

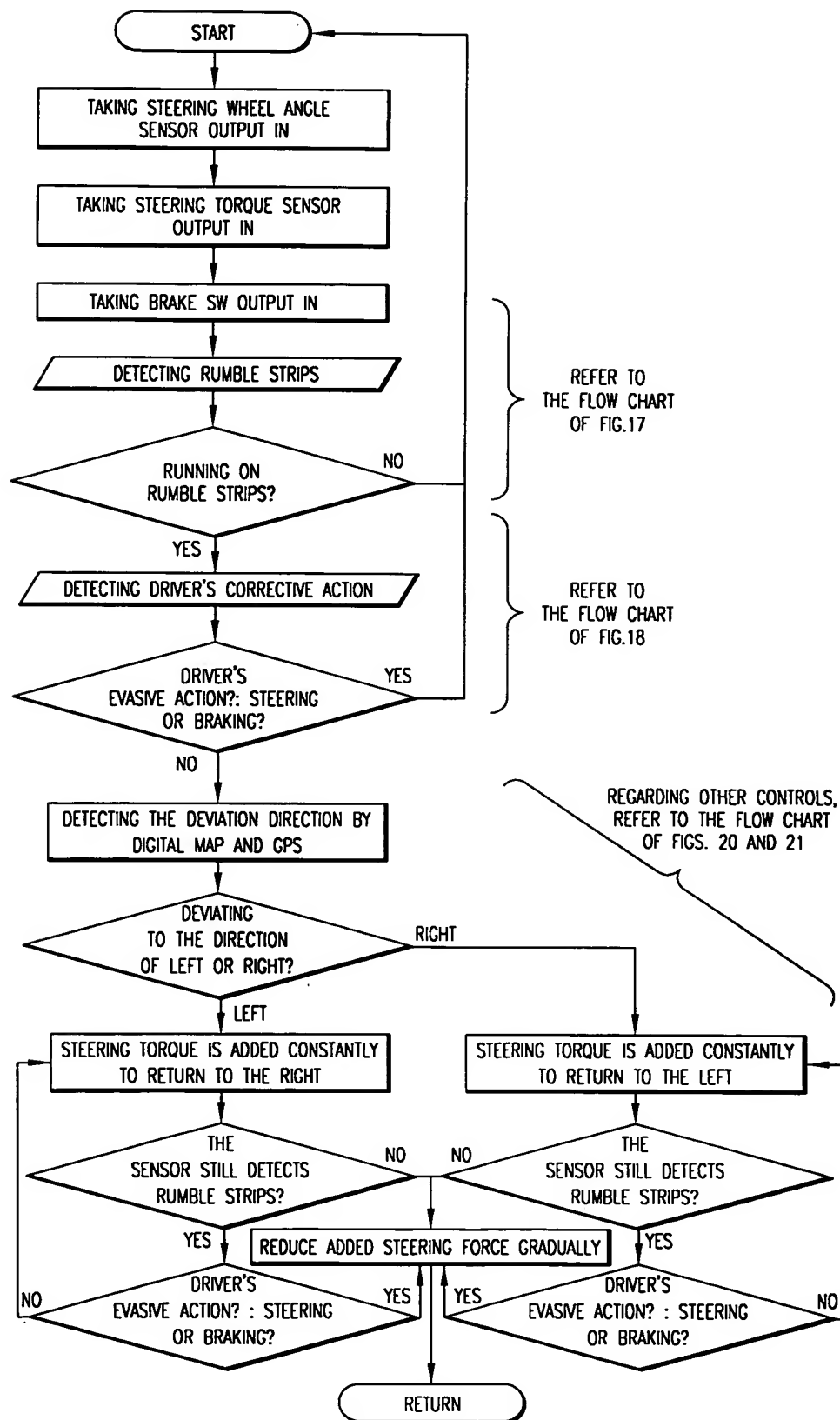


FIG.19

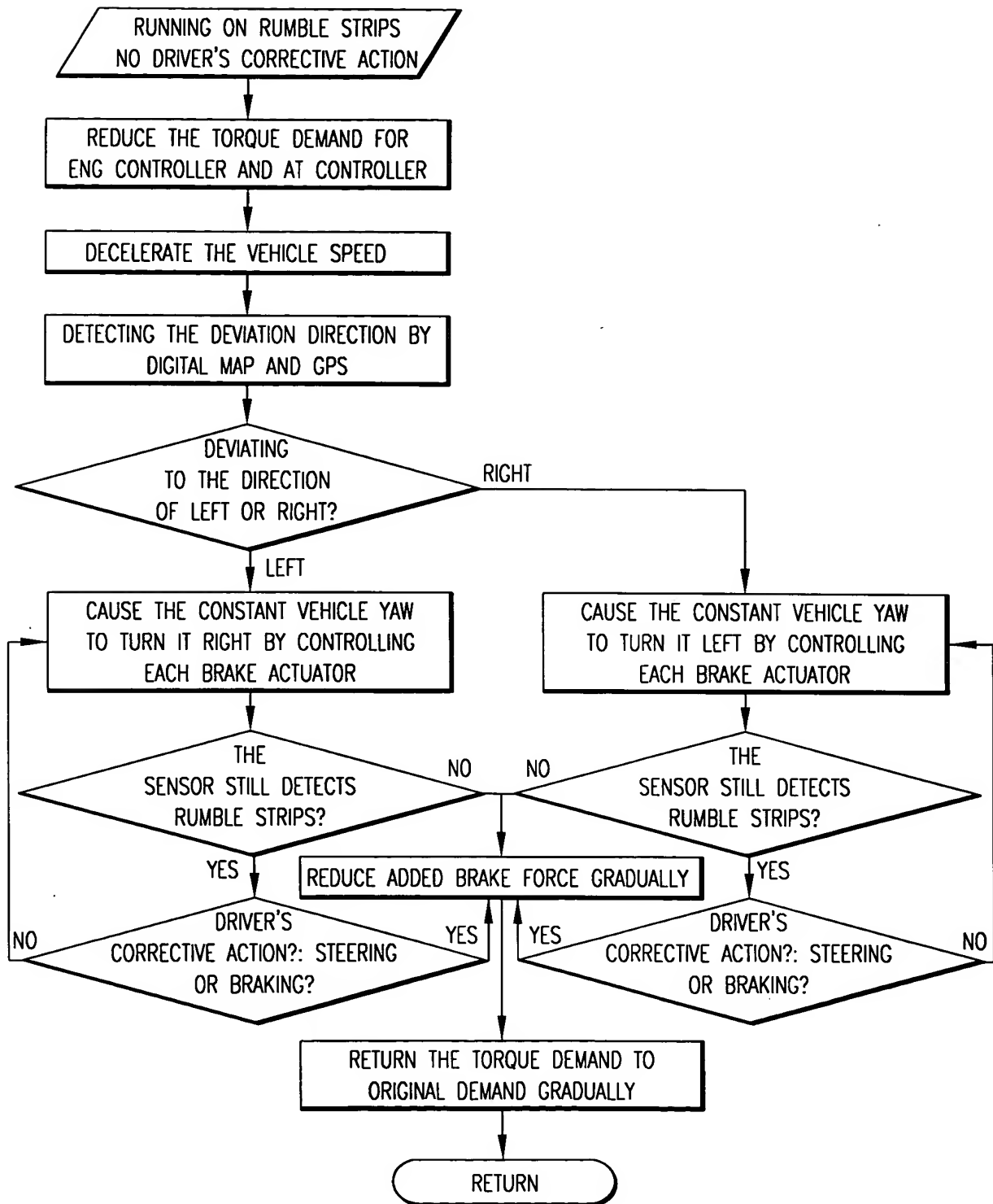


FIG.20

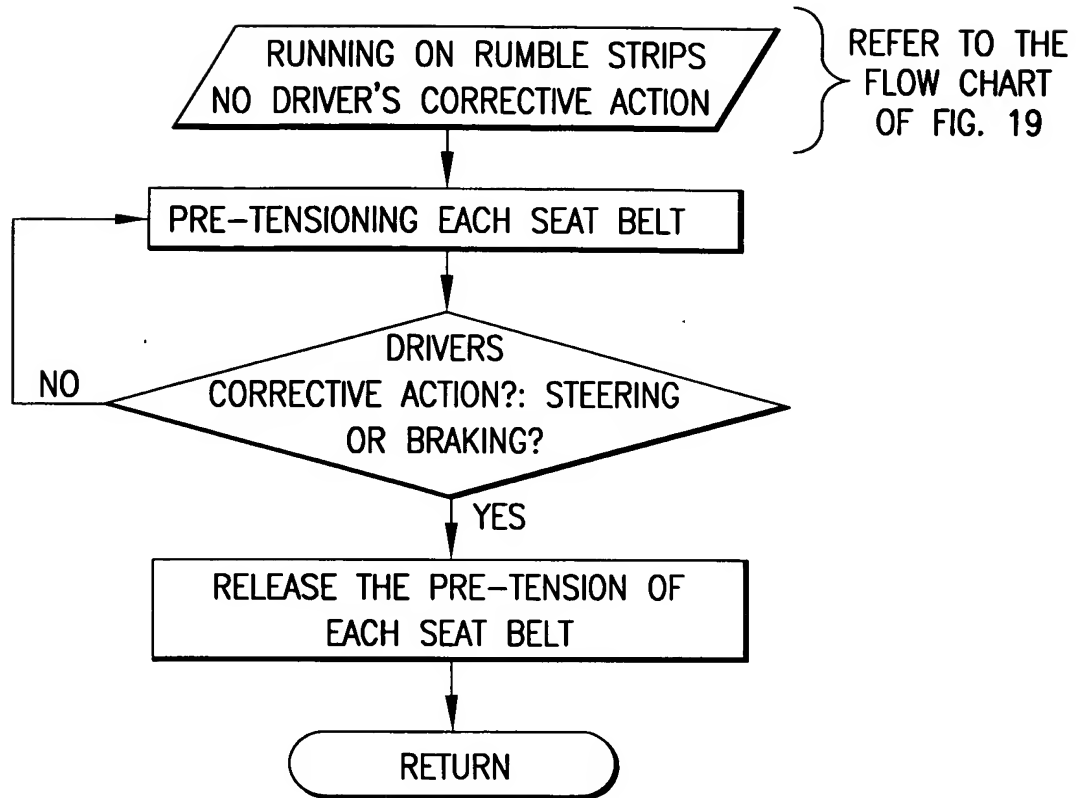


FIG.21

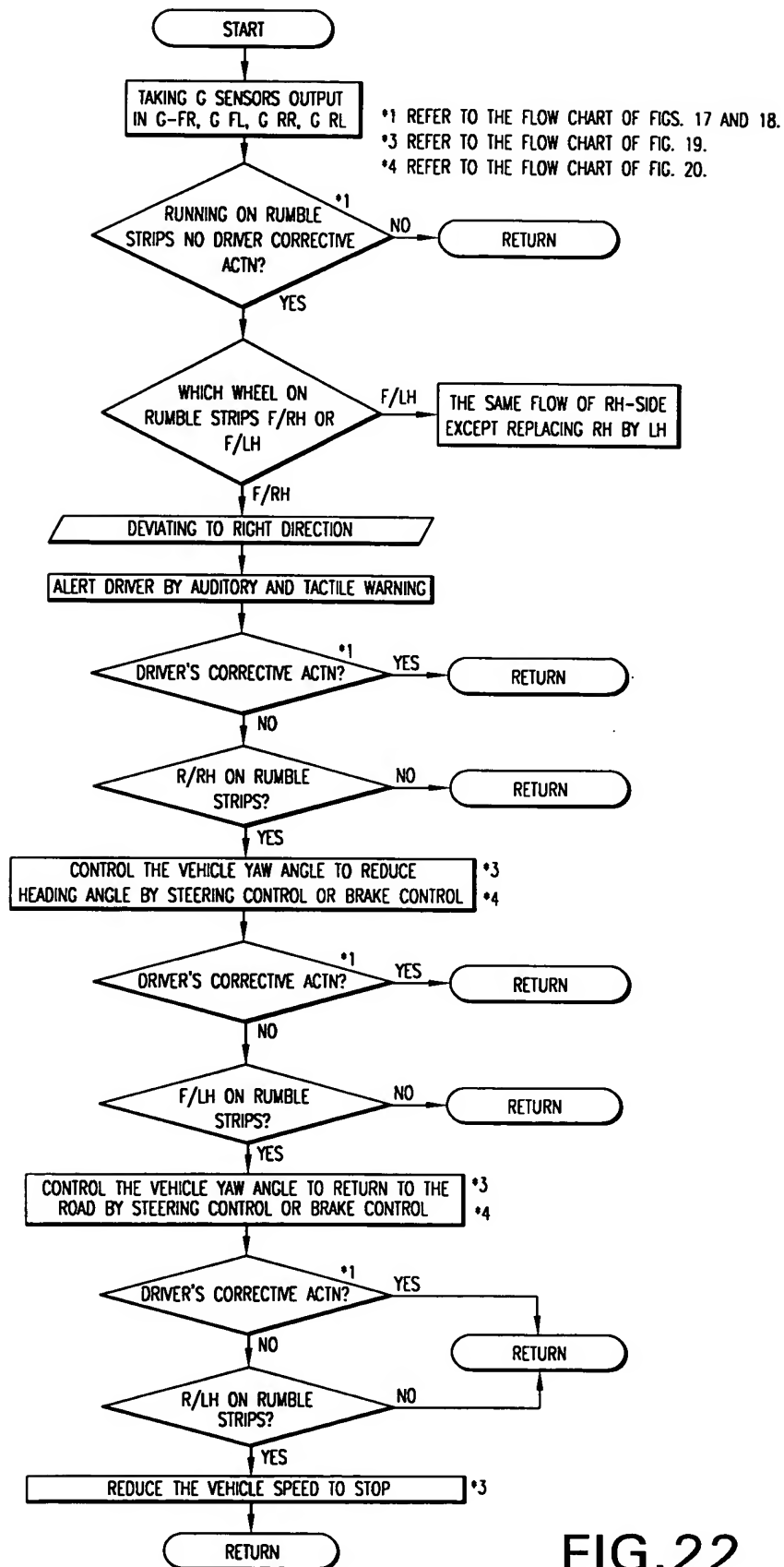


FIG.22

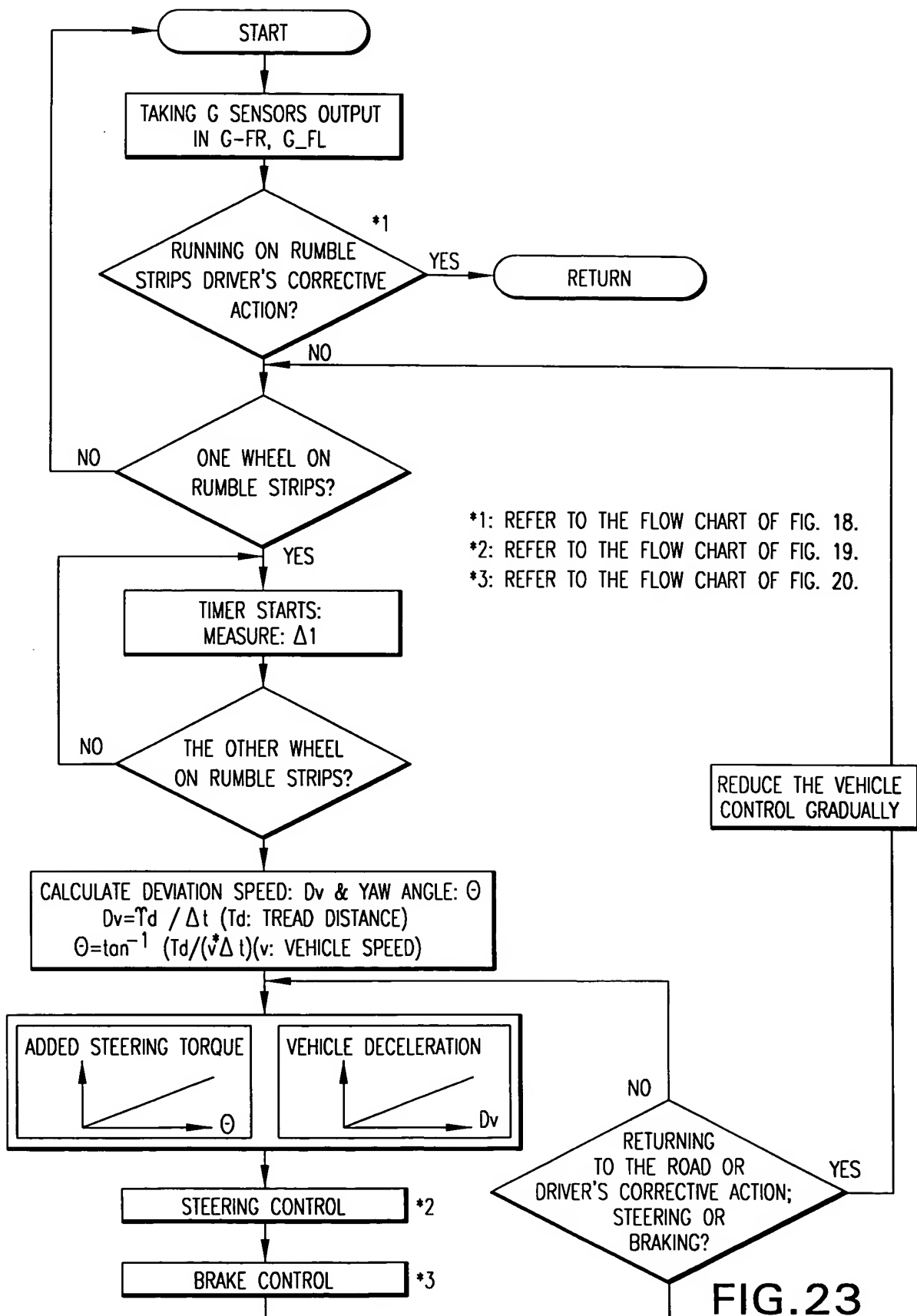


FIG.23

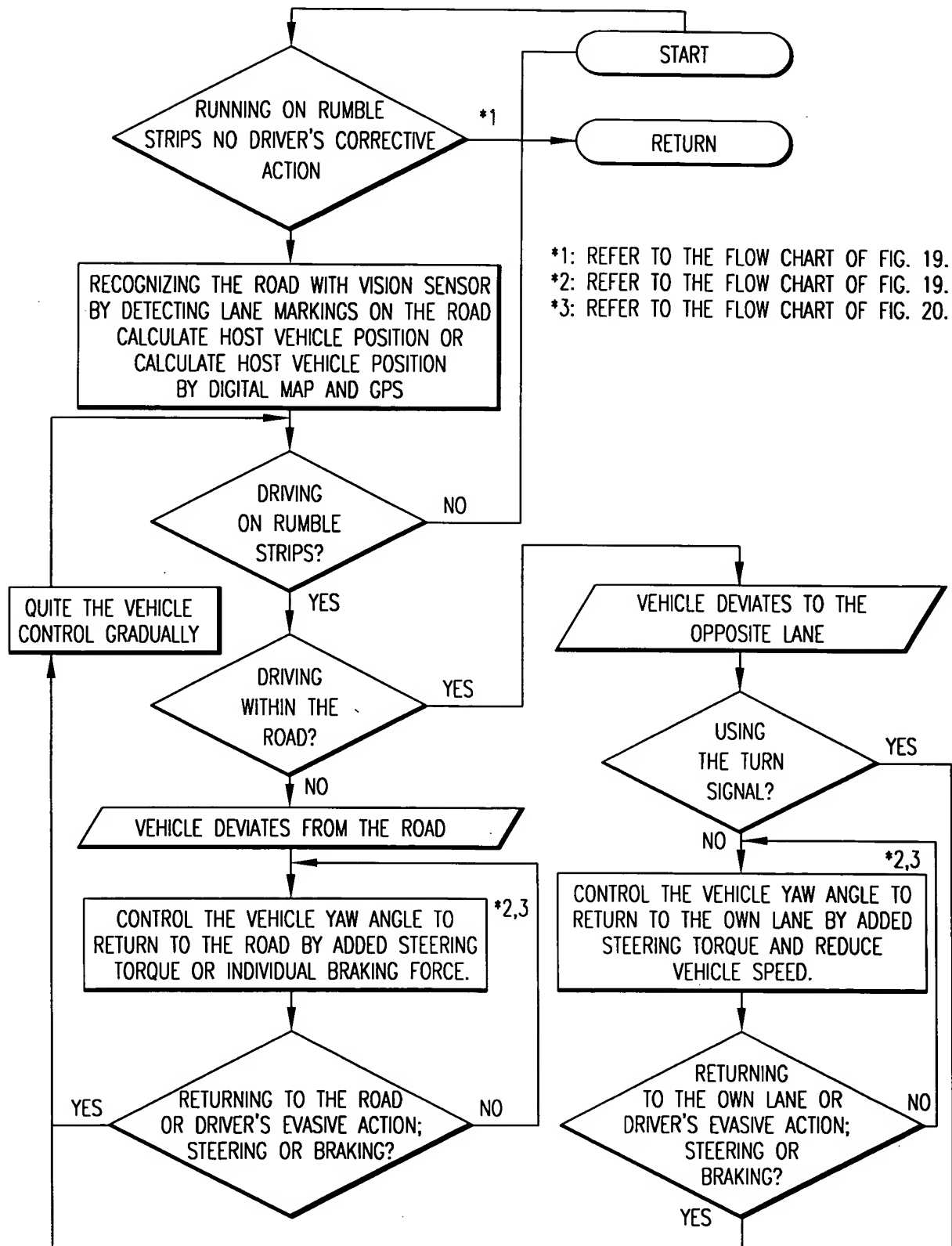


FIG. 24

\*1: REFER TO THE  
FLOW CHART OF  
FIG.18.

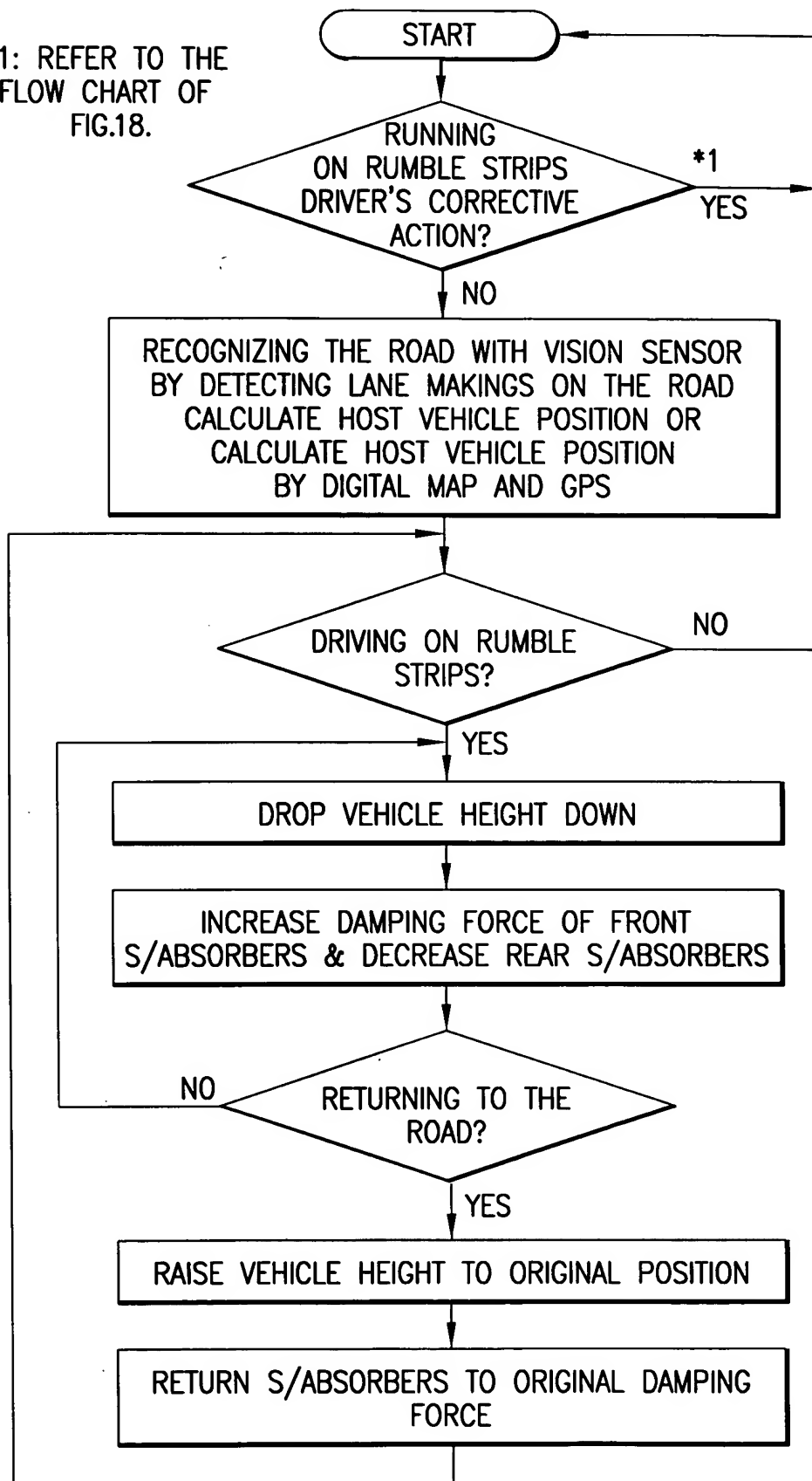


FIG.25